

Revision #:4

Material Safety Data Sheet

Prepared according to 29 CFR 1910.1200

1. Chemical Product and Company Identification

American Refining Group, Inc.
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Product Name	R&O AW ISO VG 220 Hydraulic Oil
Product Code	7386
CAS Number	Not applicable for mixtures
Generic Chemical Name	Petroleum distillate
Product Type	Mixture
Transportation Emergency Phone No.	Chemtrec: 1-800-424-9300 (24 HRS)
ARG Emergency Phone No.	814-368-1297 (24 HRS)
MSDS E-Mail	msds@amref.com

2. Hazards Identification

Appearance	Dark yellow Liquid
Odor	Petroleum Oil
Signal Word	CAUTION! May cause skin irritation May cause eye irritation May cause respiratory tract irritation
OSHA Regulatory Status	This material is NOT considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Routes of Exposure	Eye contact. Skin contact.
Precautions	
Inhalation	Avoid breathing dust/fume/gas/mist/vapors/spray. Keep container tightly closed. Use only with adequate ventilation.
Eyes	Avoid contact with eyes. Wash thoroughly after handling.
Skin	Avoid contact with skin and clothing. Wash thoroughly after handling.
Medical Conditions Aggravated by Exposure	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product
Chronic Effects	See Section 11 for complete health hazard information
Environmental Effects	See Section 12 for complete ecological information

3. Composition / Information on Ingredients

CAS No.	Component	Percent
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3. Composition / Information on Ingredients

64742-62-7	Residual Oils (petroleum), Solvent Dewaxed	45-55
64742-54-7	Hydrotreated heavy paraffinic distillate	45-55

Component Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Mineral Oil (See Section 8)

4. First Aid Measures

Eyes	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Ingestion	DO NOT INDUCE VOMITING. If conscious, rinse out mouth with water. Get medical attention immediately.
Note to Physicians	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire Fighting Measures

Flammable Properties

Not available

Extinguishing Media

Use dry chemical, CO₂, water spray (FOG) or foam

Specific Hazards Arising from Chemical

Elevated temperatures can lead to the formation of irritating fumes and vapors. Decomposition products may include the following materials: Carbon dioxide and Carbon monoxide.

Protective Equipment and Precautions for Firefighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

Personal Precautions

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material.

6. Accidental Release Measures

Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental Precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution.

Methods for Containment

Stop leak if without risk.

Methods for Cleanup

Move containers from spill area. Approach release from upwind. Absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and Storage

Handling Procedures

Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Use non-sparking tools.

Shipping and Storing Procedures

Store in accordance with local regulations. Store in a segregated and approved area. Keep in the original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. Do not store in unlabeled containers. Store and use away from heat, sparks, open flame or any other ignition source. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers that retain product residue may be hazardous. Do not reuse container.

8. Exposure Controls / Personal Protection

Component Exposure Limits

Oil Mist (mineral)

ACGIH TLV:	TWA:	N/A ppm	TWA:	5 mg/m ³	STEL:	N/A ppm	STEL:	10 mg/m ³
OSHA PEL:	TWA:	N/A ppm	TWA:	5 mg/m ³	STEL:	N/A ppm	STEL:	N/A mg/m ³
NIOSH REL:	TWA:	N/A ppm	TWA:	5 mg/m ³	STEL:	N/A ppm	STEL:	10 mg/m ³

N/A signifies not available

Engineering Controls

Material should be handled in enclosed vessels and equipment. Use only in adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Eye/Face Protection

Chemical goggles or face shield.

Skin Protection

Chemical resistant, impervious gloves complying with an approved standard should be worn at all times. Coveralls, apron, and boots as necessary to minimize contact.

Respiratory Protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicated this is necessary. Respirator selection must be based on known or anticipated exposure

8. Exposure Controls / Personal Protection

General Hygiene levels.
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.

9. Physical and Chemical Properties

Color	Dark yellow	Vapor Pressure (mm Hg at 20°C)	0
Odor	Petroleum Oil	Water Soluble	No
Physical State	Liquid	Specific Gravity (g/cc)	.89
Flash Point (°F)	500	Density (lbs/gal)	7.39
Boiling Point (°F)	>625	pH	Not available

10. Chemical Stability & Reactivity Information

Stability Stable under normal conditions
Polymerization No polymerization
Incompatibility Strong acids and oxidizing materials
Conditions to Avoid High temperatures
Hazardous Decomposition Products Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.

11. Toxicological Information

Acute Exposure
Respiratory Irritation May cause respiratory tract irritation. If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract.
Eye Irritation May cause eye irritation. Vapors formed from heating may cause eye irritation.
Skin Irritation May cause skin irritation. Prolonged or repeated direct exposure to the skin may result in symptoms of irritation and redness, dermatitis or oil acne.
Sensitization Not expected to cause skin or respiratory sensitization.

Component Analysis – LD50 / LC50

Acute Toxicity Estimate (ATE) Values for Product:

Inhalation LC50 Rat	20.18 mg/L 1 HR
Oral LD50 Rat	>5000 mg/kg
Dermal LD50 Rabbit	>4000 mg/kg

Chronic Exposure

Target Organ Effects No data available to indicate product or components present at greater than 1%

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Carcinogenicity	are chronic health hazards. This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 or Modified Ames test.
Mutagenicity	No data available to indicate product or any components present at greater than .1% are mutagenic or genotoxic.
Reproductive Toxicity	No data available to indicate product or any components present at greater than .1% are a reproductive toxin.
Teratogenicity	No data available to indicate product or any components contained at greater than .1% may cause birth defects.

12. Ecological Information

Component Analysis- Ecotoxicity – Aquatic Life

Duration/Test/Species	Concentration/Conditions
96 Hr LC50 Pimephales promelas	N/A mg/L

Degradability	Not determined
Bioaccumulation	Not determined
Soil Mobility	Not determined

13. Disposal Considerations

Disposal Instructions

The generation of waste should be avoided or minimized wherever possible. Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

14. Transportation Information

Emergency Response Guide No.	128	<i>North American Emergency Response Guide Book</i>		
U.S. DOT Bulk	UN Number	Shipping Name (technical name)	Hazard Class	Packing Group
U.S. DOT Non-Bulk		Not Regulated		
		Not Regulated		

15. Regulatory Information

SARA Extremely Hazardous Substances (Sections 302 & 304)	This product does not contain greater than 1% of any “extremely hazardous substances” listed pursuant to Title III of the Superfund
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15. Regulatory Information

SARA Section 313

Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B. This product does not contain greater than 1.0% of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

SARA Section 311 & 312 Classifications

Acute Hazard No
Chronic Hazard No
Fire Hazard No
Reactivity Hazard No

CERCLA

This product does not contain any “hazardous substances” listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

California Prop 65

This product contains chemical(s) known to the state of California to cause cancer and/or birth defects.

Clean Water Act / Oil Pollution Act

This product contains petroleum distillates and may be subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Releases of the product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.

Global Chemical Inventories

Inventory	Component
	All components
US TSCA	Listed
EU	Listed
Japan	Not Listed
Australia	Listed
New Zealand	Listed
Canada	Listed
Switzerland	Not Listed
Korea	Listed
Philippines	Listed
China	Listed
Taiwan	Not Listed

16. Other Information

US NEPA Ratings

Health	Fire	Instability
0	1	0

HMIS Ratings

Health	Fire	Physical Hazards
0*	1	0

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16. Other Information

Precautionary Labels

Signal Word

CAUTION!

May cause skin irritation

May cause eye irritation

May cause respiratory tract irritation

Preparation/Revision Date

10/29/2012

Revision Reason

Updated MSDS

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS